

TOKEN-CONTROLLED DATA TRANSMISSIONS
IN COMMUNICATION NETWORKS

ABSTRACT OF THE DISCLOSURE

A network includes multiple nodes interconnected to form a ring topology. These nodes support data transmissions over the network using tokens. To send and receive data over the network, nodes may process control messages. A node can receive a first token authorizing transmission on one of multiple data channels, generate a transmission control message identifying a destination node and the authorized data channel, and communicate the transmission control message to a next node. The node can also communicate a second token to the next node authorizing secondary transmissions on the authorized data channel, transmit data on the authorized data channel after communicating the transmission control message, and communicate the first token to the next node after communicating the second token to the next node.